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## NAS NORTH ISLAND - NAVY REGION SOUTHWEST

### NAVY ENVIRONMENTAL LEADERSHIP PROGRAM

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## POLLUTION PREVENTION

### RAG LAUNDERING

#### LEAD ACTIVITY

Naval Air Station (NAS) North Island

#### STATUS

Complete

#### MISSION

Reduce the amount of oily rags disposed of in landfills

#### REQUIREMENT

Oily rags generated during daily Navy operations contribute to the Navy's largest waste stream, oily waste. A system to reduce the oily waste stream is required. Rag laundering practices can be used at any Navy installation.

#### DESCRIPTION

Oily waste is the Navy's single largest waste stream. For 1995, San Diego activities alone generated 300,000 pounds of "oily rags" that were sent off site for landfill disposal. In 1996, the Navy Public Works Center (PWC), San Diego purchased and installed an industrial washing system to launder oily rags. The system is adjacent to the existing oily waste treatment plant at NAS North Island. To divert oily rags from landfills, PWC utilizes the accepted practice of laundering reusable textile materials and discharging the effluent to the existing permitted oily waste treatment plant.



**Rag Laundering System**

PWC oily rag laundering service is available for "baled rags" (torn clothes) for oily waste cleanup while the Fleet Industrial Supply Center (FISC) provides a laundering service through established contracts with private companies for the 100% cotton or "red rags". About 85 percent of the rags received by the PWC are laundered and recycled. The other 15 percent of the rags are covered in solvents (hazardous waste) or paints (designated wastes) and are disposed of properly. Laundering not only reduces the quantity of oily rags deposited in landfills, but also reduces the cost of new rag purchases.

## **BENEFITS**

- Reduces oily waste stream
- Diverts from landfills an estimated 230,000 pounds annually of oily "baled rags" for all San Diego activities—80,000 pounds from NAS North Island alone
- Generates a cost avoidance of approximately \$200,000 annually for all San Diego activities and \$43,700 for NAS North Island associated with the purchase of new "baled rags" since 31,000 pounds of "baled rags" were returned to service at NAS North Island
- Diverts from landfills an average of 1.76 million pounds annually of oily "red rags" for all San Diego activities— 0.67 million pounds from NAS North Island alone
- Generates an average annual cost avoidance of about \$2.42 million for all San Diego activities and about \$1 million for NAS North Island associated with the purchase of new "red rags"

## **ACCOMPLISHMENTS/CURRENT STATUS**

<b>Date</b>	<b>Activity</b>
OCT 1996	Installed and began operation of "red" and "baled" rag laundering service at PWC. FISC began contracting "red" rag laundering service
JAN 1997	Expanded pilot operations and developed customer base
OCT 1998	Doubled washing capabilities
NOV 1998	Working with NFESC on pilot program using ozone to destroy organics in rags; this technology will reduce the use of chemicals used in rag laundering and is a cold water operation which saves money by eliminating the cost to heat water
JAN 1999	Demonstration at PWC for NFESC pilot program
MAY 1999	Completed installation of ozone laundering process.
DEC 1999	Completed ozone laundering pilot program. NFESC user data package published (UPD-2007ENV).

## **COLLABORATION/TECHNOLOGY TRANSFER**

This service is cost effective for PWC to operate, as it is run in a RCRA Part B permitted hazardous waste treatment facility. Activities considering an in-house laundering operation should consider the regulatory impacts.

## **BIBLIOGRAPHY**

None available

## **RELATED GOVERNMENT INTERNET SITES**

None available

## **RELATED NAVY GUIDEBOOK REQUIREMENTS**

- 10003 Cost Effective Waste Reduction
- 10007 Installation Recycling Program

*UPDATED: 03/01/02*